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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/583,405

06/20/2006

Takuya Tsukagoshi

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OLIFF & BERRIDGE, PLC

P.O. BOX 320850

ALEXANDRIA, VA 22320-4850

EXAMINER

AMARI, ALESSANDRO V

ART UNIT

PAPER NUMBER

2872

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/583,405	Applicant(s) TSUKAGOSHI ET AL.	
	Examiner ALESSANDRO AMARI	Art Unit 2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-7 is/are rejected.
- 7) ☒ Claim(s) 4 and 8 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>6/20/2006</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 3, 5, 6 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Daiber et al US 6,549,664.

In regard to claims 1 and 5, Daiber teaches (see Figs. 1-5) a holographic recording method or holographic recording apparatus for converting digital information to a two-dimensional image, allowing an object beam (10) to be subjected to spatial optical modulation (16) based on the two-dimensional image, and irradiating a holographic recording medium (20) with the object beam in conjunction with a reference beam (12) to record the two-dimensional image using interference fringes as shown in Figure 4, wherein with four or more pixels on the two-dimensional image employed as a unit pixel block, encoded patterns having a different number of ON pixels are allowed to be present at the same time in the unit pixel block to record the two-dimensional image as described in column 3, lines 62-67 and column 4, lines 1-52.

Regarding claims 2 and 6, Daiber discloses when the number of pixels forming the unit pixel block is n , the number of the encoded patterns is a total sum of ${}_nC_0$ to ${}_nC_n$ as described in column 4, lines 53-67.

In regard to claims 3 and 7, Daiber discloses (see Figs. 1-5) a holographic memory reproduction apparatus or method for reproducing digital information by a two-dimensional photodetector (24) used for image detection, the digital information being recorded by converting the digital information to a two-dimensional image, and irradiating a holographic recording medium (20) with an object beam(10) having been subjected to spatial optical modulation based on the two-dimensional image, in conjunction with a reference beam (12) to record the two-dimensional image using interference fringes as shown in Figures 4 and 5, wherein the two-dimensional image is recorded, with four or more pixels employed as a unit pixel block and with at least two types of encoded patterns having a different number of ON pixels in the unit pixel block being allowed to be present at the same time, and the holographic memory reproduction apparatus has an ON pixel number detector for detecting the number of ON pixels on the per unit pixel block basis, and a threshold setter for setting a threshold of a detected beam intensity between ON and OFF in the two-dimensional photodetector based on the number of ON pixels detected by the ON pixel number detector as described in column 5, lines 39-67, column 6, lines 1-68 and column 7, lines 1-40.

Allowable Subject Matter

3. Claims 4 and 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. Claim 4 is allowable for at least the reason, "when the number of pixels in the unit pixel block is n , the number of types of the encoded patterns provided is equal to a total sum N of ${}_nC_0$ to ${}_nC_n$, and n types of settings are provided for the threshold of the detected beam intensity" as set forth in the claimed combination.

Claim 8 is allowable for at least the reason, "when the number of pixels in the unit pixel block is n , the number of types of encoded patterns displayed by the spatial light modulator is set to be equal to a total sum N of ${}_nC_0$ to ${}_nC_n$, and the threshold setter is allowed to provide n types of settings for the threshold" as set forth in the claimed combination.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Woods et al US 2003/0128324 is considered relevant art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALESSANDRO AMARI whose telephone number is (571)272-2306. The examiner can normally be reached on Monday-Friday 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephone B. Allen can be reached on (571) 272-2434. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2872

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ava
10 April 2008

/Alessandro Amari/
Primary Examiner, Art Unit 2872